



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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February 24, 2010

Mr. Glenn McIntosh
Project Manager
U.S. Army Corps of Engineers
Post Office Box 1890
Wilmington, North Carolina 28402-1890

**Subject: Comments on the Draft Integrated Feasibility Report and
Environmental Impact Statement (EIS) for Coastal Storm Damage
Reduction for Surf City and North Topsail Beach, North Carolina
(report dated August 2009; received January 14, 2010)
CEQ Number: 20100010; ERP Number: COE-E39079-NC**

Dear Mr. McIntosh:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the combined Draft Integrated Feasibility Report and Environmental Impact Statement (EIS) for Coastal Storm Damage Reduction for Surf City and North Topsail Beach, North Carolina, which we received on January 14, 2010. The draft combined report was issued by the Wilmington District of the US Army Corps of Engineers (Corps), and was intended to comply with the National Environmental Policy Act (NEPA), and therefore a separate EIS has not been provided. The draft document that we were provided has been termed "a fully-integrated report" that is intended to comply with all NEPA requirements, as well as the requirements of the Corps (and Federal) water resources planning process.

We understand that the purpose of the combined Draft Integrated Feasibility Report and EIS is to evaluate coastal storm damage reduction for the Towns of Surf City and North Topsail Beach, NC, and then "develop the most suitable plan of damage reduction for the present and future conditions" for the selected 50-year period of analysis. Topsail Island is on the southeastern North Carolina coast, and (from south to north) the three towns on the island are Topsail Beach, Surf City and North Topsail Beach. The primary study area for the report we reviewed includes the towns of Surf City and North Topsail Beach and the associated nearby borrow sites. We understand that this report was authorized by two U.S. House Committee on Transportation and Infrastructure resolutions dated February 16, 2000 and April 11, 2000, and that a General Reevaluation Report is also currently being completed for the Town of Topsail Beach under a separate authority.

The Wilmington District study team appropriately included representatives of Federal, State, and local governments, in an effort "to identify cost-effective and

environmentally- and technically-sound alternatives to reduce damages within the two towns, and to the adjacent shoreline.” The process reportedly integrated the Corps’ “Twelve Actions for Change”, in all aspects of the NEPA process. The study effort appropriately identified a “National Economic Development” (NED) Plan, which is formulated to “maximize net benefits through reduction of future storm damages.” No Locally Preferred Plan was reportedly suggested, and construction of the NED Plan is the Corps’ tentatively recommended plan of improvement. The study we reviewed concluded that “the most practicable plan” of damage reduction for the primary study area is a “berm and dune project extending along approximately 10 miles of the oceanfront.” The southern limit of the project is the boundary between Topsail Beach and Surf City, while the northern limit is within North Topsail Beach at the southern edge of the Coastal Barrier Resources System (Topsail Unit, L06).

The draft report appropriately included a stated “purpose and need” for the project, to include the “reduction of damages associated with coastal storm events and beach erosion,” as well as “enhancing the beach strand available for recreation use and providing needed habitat for a variety of plants and animals.” The draft report also appropriately included an analysis of various measures and plans, and then recommended selection of the plan with the highest net benefits while determining that the improvement is justified under current planning criteria and policies. The tentatively selected NED Plan consists of a sand dune system constructed to an elevation of 15 feet above the National Geodetic Vertical Datum (NGVD), fronted by a 50-foot wide beach berm constructed to an elevation of 7 feet above NGVD, with the berm and dune extending along a reach of 52,150 feet in length (about 10 miles). This plan is identified among the other alternatives as “Plan 1550.”

The draft report appropriately followed detailed guidance provided in the U.S. Army Corps of Engineers Planning Guidance Notebook (Engineer Regulation 1105-2-100) for studies of water and related land resources. This guidance is “based upon the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies that were developed pursuant to Section 103 of the Water Resources Planning Act (P.L. 89-80) and Executive Order 11747, which were approved by the U.S. Water Resources Council in 1982 and by the President in 1983.” The draft report also appropriately references a number of prior studies conducted in the Topsail Island area, including engineering, planning, and environmental reports. These studies have addressed coastal storm damage reduction as well as navigational needs.

An economic analysis was appropriately conducted as part of the study, and a Benefit/Cost Ratio has been calculated ($BCR = 3.7$) for the tentatively recommended plan (based upon October 2008 price levels). First costs of the project are currently estimated at \$118,000,000, and renourishment costs at 4-year intervals are estimated to be \$17,600,000. Expected annual costs are estimated at \$10,900,000, with expected annual benefits estimated at \$40,000,000 (\$16,900,000 of these annual benefits are coastal storm damage reduction benefits, \$20,000,000 are recreation benefits and \$3,100,000 are benefits during construction). The baseline cost estimate for construction in FY2015 is reported to be \$126,000,000.

The following are EPA's comments on the Draft Integrated Feasibility Report and the EIS:

- We are currently reviewing the Final Environmental Impact Statement (FEIS) for the proposed project adjacent to this one, known officially as the "Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC."
- Based upon the recommendations regarding use of public funds for the reduction of damages along this shoreline, the Sponsors have reportedly agreed to provide public access and parking in accordance with Corps guidelines, at "intervals of no more than a half mile, throughout Surf City and the reach of North Topsail Beach benefitted by the cost-shared project." EPA recommends that the FEIS include an excerpt(s) from the Corps guidelines about public access and parking to ensure that the project interval "of no more than a half mile" meets these guidelines.
- Council on Environmental Quality (CEQ) regulations (40 CFR 1502.15) require an EIS to describe the environment of the areas to be affected (or created) by the alternatives under consideration. The data and analysis in the draft report were found to be commensurate with the importance of the impacts, although EPA still has some general concerns about the potential impacts from use of a hopper dredge on marine threatened and endangered resources (e.g., such as the potential for entrainment of sea turtles associated with hopper dredges). EPA's specific concerns are the project's impacts to the green sea turtle, loggerhead sea turtle, Kemp's ridley sea turtle, and the leatherback sea turtle, which are all known to nest in the project vicinity. These species could be affected by initial project construction and periodic renourishment, and the sea turtles that occur in offshore waters may be affected by hopper dredges. EPA strongly recommends initial construction and periodic renourishment activities not be conducted during the sea turtle nesting season. EPA further recommends that hopper dredging not be conducted during months when water temperatures are warm and the various turtle species may be present.
- EPA continues to have concerns about the project's impacts to the piping plover, which has been documented to feed along the 10-mile project reach. During the winter months the piping plover has been documented to be found in the surf zone. EPA strongly recommends the development and implementation of stringent construction criteria to ensure that the project does not affect the piping plover's foraging activities on the beach. EPA is particularly concerned that the piping plover's beach food resources may be affected by beachfill operations.
- EPA recommends that the U.S. Fish and Wildlife Service and the National Marine Fisheries Service review and provide recent concurrence letters (to be included in the FEIS) regarding the adequacy of the Biological Assessment developed for this project pursuant to Section 7 (of the Endangered Species Act of 1973) and presented with the draft report.
- As mentioned previously, we are also currently reviewing the FEIS for the adjacent project known as the "Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the

Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC.” This FEIS describes a plan by the Town of North Topsail Beach to develop a non-Federal coastal storm damage reduction project for the parts of the town that lie within the Coastal Barrier Resources System (Topsail Unit, L06). EPA recommends careful coordination between the two projects to ensure that there are no conflicts between the Federal and non-Federal projects, either on the shoreline or in the borrow areas. Your draft report states that in the event that the non-Federal project is not in place when the Federal project begins, then the northern 2,000 ft of the dune and berm system will be replaced with a transition section. Your FEIS should include specific engineering details about what this 2,000 ft transition section would look like and how it may affect the overall NED Plan.

- We understand that the Agency Technical Review (ATR) was conducted in accordance with the Corps’ “Peer Review of Decision Documents” process, and this means the proposed project “has been reviewed by Corps staff outside the originating office, conducted by a regional and national team of experts in the field, and coordinated by the National Planning Center of Expertise in Coastal Storm Damage Reduction, North Atlantic Division, U.S. Army Corps of Engineers.” EPA recommends that the FEIS include all comments and responses developed as part of the ATR process.
- We further understand that an “Independent External Peer Review” (IEPR) will be conducted (following the ATR) by a “non-USACE national team of experts in the field, and coordinated by the National Planning Center of Expertise in Coastal Storm Damage Reduction, North Atlantic Division, U.S. Army Corps of Engineers.” EPA recommends that the FEIS include all comments and responses developed as part of the IEPR process.
- CEQ regulations (40 CFR 1502.14(a)) require that an EIS is to “rigorously explore and objectively evaluate all reasonable alternatives” for a proposed action. The regulations (40 CFR 1502.14(b)) further require that substantial treatment be made of each alternative considered in detail, including the proposed action. The draft report appropriately notes that study team considered both structural and non-structural measures. EPA recommends that the FEIS include complete details on the nonstructural measures that were considered, such as removal and relocation, as well as final summaries of the economic analyses (using recent economic data) that found these nonstructural measures to have greater costs than benefits.
- The draft report appropriately assesses project risk, uncertainty, and consequences, and generally describes these with sufficient detail so that that “decisions can be made with knowledge of the degree of reliability of the estimated benefits and costs and of the effectiveness of alternative plans.” EPA concurs that all recommendations made in the FEIS should be capable of being implemented through adaptive management, should future conditions warrant such. The draft report appropriately notes that “renourishment may be needed more often or less often, depending on the occurrence of large storms and accompanying erosion.”

- To avoid conflicts, the project should be coordinated with monitoring efforts led by the North Carolina Recreational Water Quality Program (NCRWQ), which regularly tests these coastal waters in order to protect public health by monitoring and notifying the public when bacteriological standards for safe bodily contact are exceeded. Also, the project should be coordinated with the North Carolina Department of Environmental and Natural Resources, Division of Environmental Health, Shellfish Sanitation Section, which is also continually monitoring and classifying these coastal waters as to their suitability for shellfish harvesting for human consumption.
- The main channel of the Atlantic Intracoastal Waterway (AIWW) in North Carolina has been maintained by dredging for over 70 years to remove shoals that periodically develop. Some of the dredged material removed during maintenance activities is reported to be a high quality beach sand. This material has been placed directly on nearby ocean beaches, or stockpiled in confined disposal areas near the shoreline of the AIWW. Other area sand sources are from dredging activities in the New Topsail Inlet and Connecting Channels, as well as the New River Inlet. EPA recommends that these sand sources be considered for renourishment activities for the 10-mile long project reach.
- The FEIS should include complete supporting geotechnical information, especially representative boring logs and/or grain size analysis plots from soil borings conducted in the finalized borrow areas.
- EPA recommends that areas with extensive hard bottom area and/or relatively low volumes of beach compatible material be ruled out as potential sources of borrow material for this project. Final selection of borrow areas should be based upon high volumes of accessible, beach quality sands. We recommend rigorous delineation of all hard bottom resources within each prospective borrow area before commencement of work in order to avoid potential impacts to hard bottom resources (particularly from hopper dredging activities). The State of North Carolina's hard bottom buffer rule language requires that dredging should not be conducted "on or within 500 meters of significant biological communities, such as high relief hard bottom areas." EPA supports the Corps' efforts to use divers to conduct ground truth confirmation in the potential borrow areas, as well as collecting sediment samples, conducting video documentation, and employing sidescan technology, all for the purpose of assisting with hardbottom avoidance.
- EPA supports the on-going characterization of potential borrow areas during all 4 seasons in order to determine if there are significant differences in species composition and diversity for each sampling period.
- The FEIS should cite North Carolina Division of Marine Fisheries (NCDMF) commercial finfish and shellfish updated data (from 2009).
- The FEIS should discuss efforts to protect the 937-foot long Surf City Ocean Pier during construction, as it is apparently located within the proposed beach fill area.
- The draft report has a section reporting on the Administration's position on funding of coastal storm damage reduction projects. As this report was under development in 2008, this should be clarified (e.g., the current Administration?). We understand that the Office of Management and Budget (OMB) advises that "while the Water Resources Development Act of 1999 (WRDA 99) changed the

cost-sharing formula for the long-term sand renourishment component of certain future shore protection projects," these changes did not go far enough considering the long-term cost of most of these projects. Further, because WRDA 99 delayed the effect of the change in cost sharing for up to a decade or more, it reportedly "did not address current constraints on Federal spending," and therefore the Administration intends to work with Congress to address these problems.

However, EPA understands that until these issues are satisfactorily resolved, there will be no authorization of new shore protection projects "that involve significant long-term Federal investments beyond the initial construction of these projects, and will give new shore protection projects that are already authorized low priority for funding."

- Finalized mitigation measures should be presented in the FEIS, to include specific measures recommended by U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) for protection of all threatened and endangered species. The finalized mitigation plan should include specific finalized protocols to be employed should any sea turtles be encountered during the dredging activity.

Thank you for the opportunity to provide comments on this draft report. Because of our concerns about the use of hopper dredges and the potential effects on marine and threatened and endangered resources, we rate this DEIS as EC-2, meaning we have some environmental concerns and have requested that information be provided in the FEIS (the finalized mitigation plan, the finalized sea turtle protocol, and a map of the final selected borrow areas). If you wish to discuss these comments or have any other questions, please contact me at (404) 562-9611 (mueller.heinz@epa.gov) or Paul Gagliano, P.E., of my staff at (404) 562-9373 (gagliano.paul@epa.gov).

Sincerely,

Christine M. Hoberg / for

Heinz J. Mueller, Chief
NEPA Program Office
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